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On Image Database File TOBIKOBACHI Based on the Japanese Encyrtid Wasps[1), 2)]

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Abstract. An image database file TOBIKOBACHI based on the Japanese Encyrtid wasp collection of Dr. T. Tachikawa is reconstructed and open to the public via the Internet. Each record is composed of 16 items as follows: scientific names (family, genus and species), Japanese name, distribution data, type locality, type depository, source of the original description, synonymy, flying season, hosts, parasites, references, notes and images. The images include various parts of the body, such as the general habitus, head, antenna, mandible, scutellum, wings, stigmal vein and genitalia. A home page of the TOBIKOBACHI is presented. It is administered by a SIGMA management system.

Key words: bioinformatics, entomology database, Japanese Encyrtid wasps, images, TOBIKOBACHI, SIGMA, Internet.

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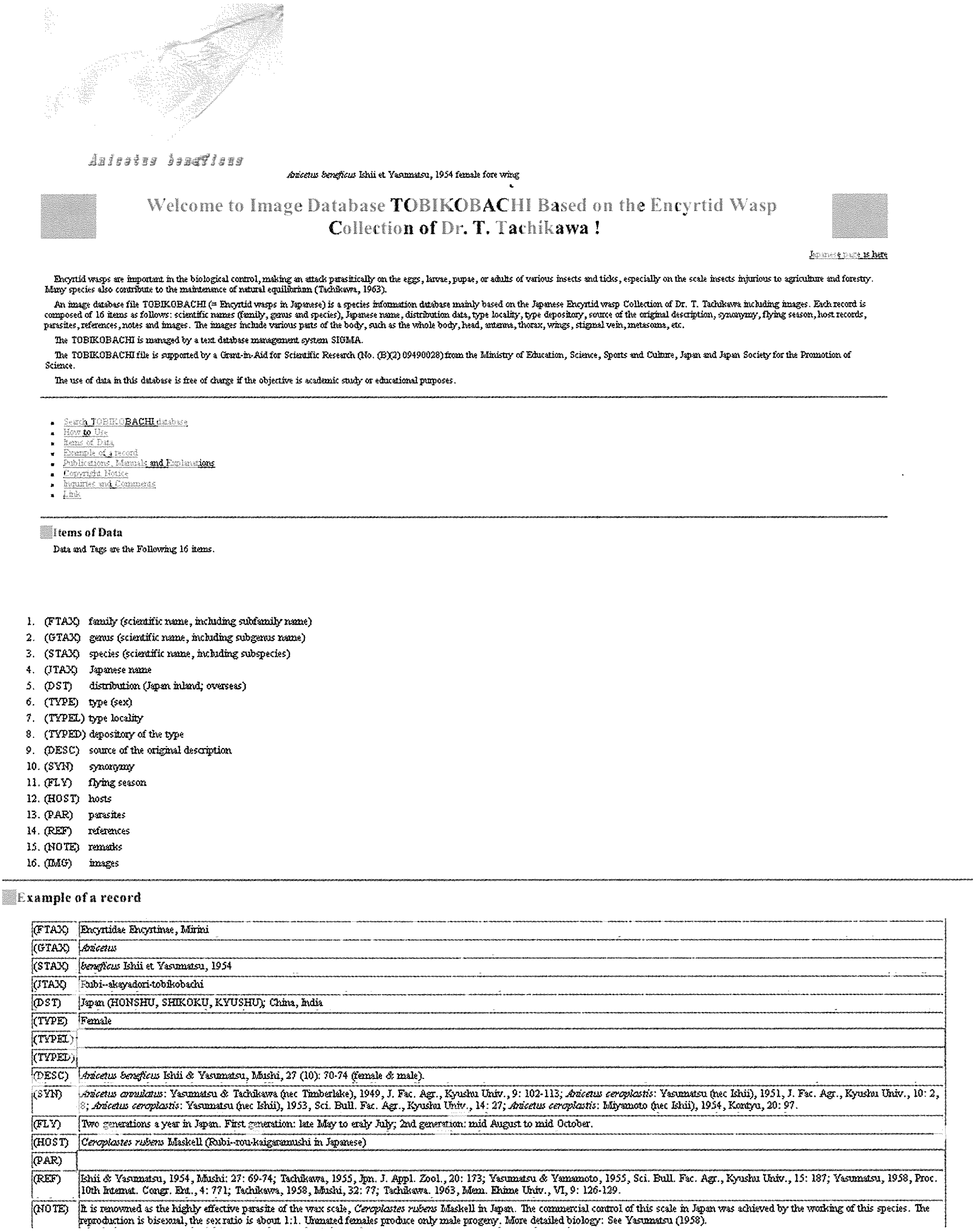
We have constructed species information database on Japanese, East Asian and Pacific insects, KONCHU (about 130,000 records at present) which includes five main files, KONCHUR, HANABACHI, MOKUROKU, DJI and ELKUType (Tadauchi *et al.*, 2002). It is available to the public via the Internet. In 1991 Tadauchi and Higashiura constructed an image database file TOBIKOBACHI (= Encyrtid wasp in Japanese) (first version), which was based on Encyrtid wasp collection of Prof. Emeritus Tetsusaburo Tachikawa of Ehime University presented to Entomological Laboratory, Kyushu University (Tadauchi & Higashiura, 1996). However the images in the database of the first version were stored in a metallic optical disk (CRV disc) in a Laser videodisc recording system (Sony, Inc.) and the file was on an off line network. Although the TOBIKOBACHI file was our first image database, it was not available to the public and our second database file HANABACHI based on the Japanese bees was opened via the Internet earlier (Tadauchi *et al.*, 2001). In the present work we took all the images in the old TOBIKOBACHI file from the CRV disc in a PC computer and reconstructed a new image database file TOBIKOBACHI (second version) with various literal data.

The TOBIKOBACHI is a special file including detailed data of the Japanese Encyrtid wasps such as taxonomy, biology and distribution with various images of the body. Each record is composed of 16 items with the following tags:

1. (FTAX) family (scientific name, including subfamily name)
2. (GTAX) genus (scientific name, including subgenus name)
3. (STAX) species (scientific name, including subspecies name)
4. (JTAX) Japanese name
5. (DST) distribution (Japan inland; overseas)
6. (TYPE) type
7. (TYPEL) type locality
8. (TYPED) depository of the type
9. (DESC) source of the original description
10. (SYN) synonymy
11. (FLY) flying season
12. (HOST) hosts
13. (PAR) parasites
14. (REF) references
15. (NOTE) notes
16. (IMG) images



Anicetus beneficus Ishii et Yasumatsu, 1954 female fore wing

Welcome to Image Database TOBIKOBACHI Based on the Encyrtid Wasp Collection of Dr. T. Tachikawa !

Japanese page is here

Encyrtid wasps are important in the biological control, making an attack parasitically on the eggs, larvae, pupae, or adults of various insects and ticks, especially on the scale insects injurious to agriculture and forestry. Many species also contribute to the maintenance of natural equilibrium (Tachikawa, 1963).

An image database file TOBIKOBACHI (= Encyrtid wasps in Japanese) is a species information database mainly based on the Japanese Encyrtid wasp Collection of Dr. T. Tachikawa including images. Each record is composed of 16 items as follows: scientific names (family, genus and species), Japanese name, distribution data, type locality, type depository, source of the original description, synonymy, flying season, host records, parasites, references, notes and images. The images include various parts of the body, such as the whole body, head, antenna, thorax, wings, stignal vein, metasoma, etc.

The TOBIKOBACHI is managed by a text database management system SIGMA.

The TOBIKOBACHI file is supported by a Grant-in-Aid for Scientific Research (No. (B)(2) 09490028) from the Ministry of Education, Science, Sports and Culture, Japan and Japan Society for the Promotion of Science.

The use of data in this database is free of charge if the objective is academic study or educational purposes.

- Search TOBIKOBACHI database
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Items of Data

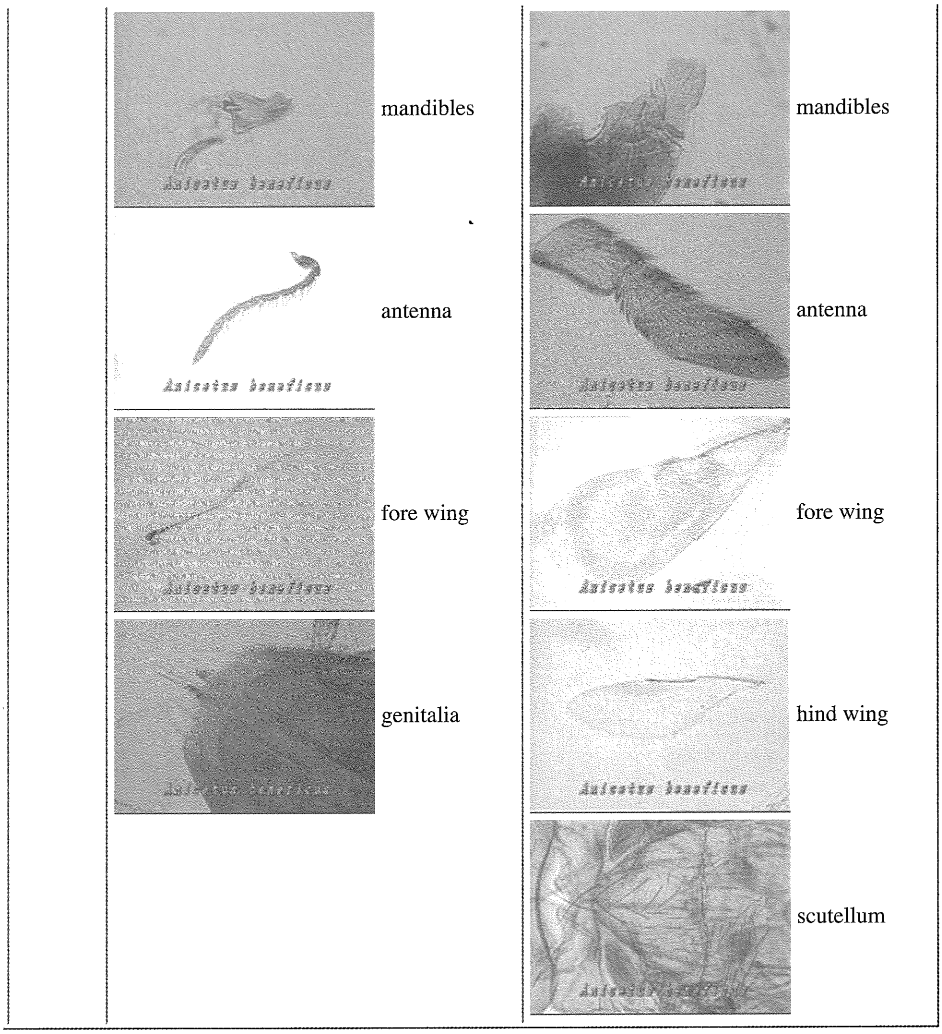
Data and Tags are the Following 16 items.

1. (FTAX) family (scientific name, including subfamily name)
2. (GTAX) genus (scientific name, including subgenus name)
3. (STAX) species (scientific name, including subspecies)
4. (JTAX) Japanese name
5. (DST) distribution (Japan inland; overseas)
6. (TYPE) type (sex)
7. (TYPEL) type locality
8. (TYPED) depository of the type
9. (DESC) source of the original description
10. (SYN) synonymy
11. (FLY) flying season
12. (HOST) hosts
13. (PAR) parasites
14. (REF) references
15. (NOTE) remarks
16. (IMG) images

Example of a record

(FTAX)	Encyrtidae Encyrtinae, Mirini
(GTAX)	*Anicetus*
(STAX)	*beneficus* Ishii et Yasumatsu, 1954
(JTAX)	Rubi--akayadori-tobikobachi
(DST)	Japan (HONSHU, SHIKOKU, KYUSHU); China, India
(TYPE)	Female
(TYPEL)	
(TYPED)	
(DESC)	*Anicetus beneficus* Ishii & Yasumatsu, Mushi, 27 (10): 70-74 (female & male).
(SYN)	*Anicetus annulatus*: Yasumatsu & Tachikawa (nec Timberlake), 1949, J. Fac. Agr., Kyushu Univ., 9: 102-113; *Anicetus ceroplastis*: Yasumatsu (nec Ishii), 1951, J. Fac. Agr., Kyushu Univ., 10: 2, 8; *Anicetus ceroplastis*: Yasumatsu (nec Ishii), 1953, Sci. Bull. Fac. Agr., Kyushu Univ., 14: 27; *Anicetus ceroplastis*: Miyamoto (nec Ishii), 1954, Kontyu, 20: 97.
(FLY)	Two generations a year in Japan. First generation: late May to eraly July; 2nd generation: mid August to mid October.
(HOST)	*Ceroplastes rubens* Maskell (Rubi--rou-kaigaramushi in Japanese)
(PAR)	
(REF)	Ishii & Yasumatsu, 1954, Mushi: 27: 69-74; Tachikawa, 1955, Jpn. J. Appl. Zool., 20: 173; Yasumatsu & Yamamoto, 1955, Sci. Bull. Fac. Agr., Kyushu Univ., 15: 187; Yasumatsu, 1958, Proc. 10th Internat. Congr. Ent., 4: 771; Tachikawa, 1958, Mushi, 32: 77; Tachikawa. 1963, Mem. Ehime Univ., VI, 9: 126-139.
(NOTE)	It is renowned as the highly effective parasite of the wax scale, *Ceroplastes rubens* Maskell in Japan. The commercial control of this scale in Japan was achieved by the working of this species. The reproduction is bisexual, the sex ratio is about 1:1. Unmated females produce only male progeny. More detailed biology: See Yasumatsu (1958).

Fig. 1. Home page of the image database file TOBIKOBACHI based on the Japanese Encyrtid wasps in English version. A Japanese version is also available.



Publications, Manuals and Explanations

- Tadauchi, O. & Y. Higashiura, 1996. Image database file TOBIKOBACHI, in a taxon-based entomology database KONCHU, using metallic optical disk (Hymenoptera, Encyrtidae). Jap. J. Entomol., 64: 613-614.

Copyright Notice

Entomology Database Project Group (Head: Osamu Tadauchi, Editor: Yoshimitsu Higashiura, System administrator: Hitoshi Inoue) holds the copyright on the entomology database TOBIKOBACHI.

Fig. 2. An Example of the images, *Anicetus beneficus* Ishii et Yasumatsu, in the image database TOBIKOBACHI.

Encyrtid wasps are important in the biological control, making an attack parasitically on the eggs, larvae, pupae, or adults of various insects and ticks, especially on the scale insects injurious to agriculture and forestry (Tachikawa, 1963). The image database TOBIKOBACHI will be helpful for applied entomologists and biologists as well as taxonomists to get species information with images on the Japanese Encyrtid wasps. The images include various parts of the body, such as the general habitus, head, antenna, mandible, scutellum, wings, stigmal vein and genitalia. It is written mainly in English with Japanese and is administered by a SIGMA management system working at a work-station in the Entomological Laboratory, Kyushu University.

A user can access to the database file by visiting the following URL: http://konchudb.agr.agr.kyushu-u.ac.jp/tobikobachi/. The home page of the TOBIKOBACHI is presented in Figs. 1-3. The operation of the SIGMA system is explained in Arikawa *et al.* (1987, 1988).

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References

Arikawa, S. *et al.*, 1987. A text database management system SIGMA, Version 2. *Koho, Computer Center Kyushu Univ.*, **20**: 517-581. (In Japanese.)

Arikawa, S. *et al.*, 1988. SIGMA: A text database management system. *RIFIS Techn. Rep. Res. Inst. Fundam. Inform. Sci., Kyushu Univ.*, **CS-3**: 1-16.

Tachikawa,T.,1996. Revisional studies on the Encyrtidae of Japan (Hymenoptera: Chalcidoidea). *Mem.Ehime Univ., Sect VI*, **9**: 1-264.

Tadauchi, O. & Y. Higashiura, 1996. Image database file TOBIKOBACHI, in a taxon-based entomology database KONCHU, using metallic optical disk (Hymenoptera, Encyrtidae). *Jap. J. Entomol.*, **64**: 613-614.

Tadauchi, O., A. Dawut & H. Inoue, 2001. On image database file HANABACHI based on the Japanese bees. *Esakia*, (41): 149-154.

Tadauchi, O., S. Kamitani, H. Inoue & A. Dawut, 2002. On database file ELKUType based on the type collection preserved in the Entomological Laboratory, Kyushu University. *Esakia*, (42): 41-46.